

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended) A card reader for reading data contained in a card comprising:

~~An~~ an electrical connector for use in a host device for electrically connecting to an electrical mating connector of a said card to read data contained therein,
~~comprising:~~

wherein said electrical connector comprises:

a rigid substrate₁ and

a contact which is in adjacent direct contact with said rigid substrate so as to be directly supported by said rigid substrate,

wherein said contact makes electrical connection with a corresponding contact on the electrical mating connector of said card,

wherein said contact ~~of~~ is a collapsible, resiliently deformable hollow projection, ~~and~~

wherein an area between said contact and said rigid substrate is empty to permit said contact to move between a fully collapsed deformed state and a fully extended undeformed state₁

wherein an opposing force opposing a force deforming and collapsing said contact is provided by said rigid substrate directly to said contact, and

wherein an inside surface of said contact when in the fully collapsed deformed state is in substantially direct contact with the surface of said rigid substrate.

2. (currently amended)A card reader~~An electrical connector~~ as claimed in claim 1, wherein an exterior surface of the contact is generally convex.

3. (currently amended)A card reader~~An electrical connector~~ as claimed in claim 1, wherein said contact is generally dome-shaped.

4. (currently amended)A card reader~~An electrical connector~~ as claimed in claim 1, wherein said contact comprises a metal.

5. (currently amended)A card reader~~An electrical connector~~ as claimed in claim 1, wherein said contact comprises an insulating material treated so as to be conductive.

6. (currently amended)A card reader~~An electrical connector~~ as claimed in claim 1, wherein said rigid substrate comprises a Printed Circuit Board (PCB).

7. (currently amended)A card reader~~An electrical connector~~ as claimed in claim 6, wherein said PCB is flexible.

8. (currently amended)~~A card reader~~An electrical connector as claimed in claim 1, wherein said rigid substrate supports a conductive track electrically coupled to the contact.

9. (currently amended)~~A card reader~~An electrical connector as claimed in claim 1, further comprising:

means for retaining the mating connector of the card in releasable contact with said contact of said electrical connector.

10. (currently amended)~~A card reader~~An electrical connector as claimed in claim 1, wherein said contact is secured in position on said rigid substrate using solder.

11. (currently amended)~~A card reader~~An electrical connector as claimed in claim 1, wherein said electrical connector comprises a plurality of contacts.

12. (currently amended)~~A card reader~~An electrical connector as claimed in claim 1, wherein said rigid substrate supports a contact on each of two opposing surfaces of said rigid substrate.

13. (currently amended)~~A card reader~~An electrical connector as claimed in claim 12, wherein said electrical connector is arranged to make contact with two mating connectors arranged on the sides of two cards.

14. (currently amended) A card reader ~~An electrical connector~~ as claimed in claim 1, wherein said card reader ~~electrical connector~~ is for use as a smart card reader for reading a smart card.

15. (currently amended) A card reader ~~An electrical connector~~ as claimed in claim 14, wherein the smart card is a SIM card for use with a portable telephone.

16. (currently amended) ~~An electrical~~ A portable telephone comprising an ~~electrical connector~~ a card reader according to claim 1.

17. (currently amended) A card reader for reading data contained in a card comprising: An
an electrical connector apparatus for use in a host device for electrically connecting to an electrical mating connector of said a card to read data contained therein,

wherein said electrical connector comprises: to said host device, comprising:
a rigid substrate,
supporting a contact which is in adjacent direct contact with said rigid
substrate so as to be directly supported by said rigid substrate for making electrical
connection with a corresponding contact on said electrical mating connector of said
card; and

means for retaining said card including said electrical mating connector in releasable direct contact with said contact ~~of said substrate~~,

wherein said contact ~~of said substrate~~ is a collapsible, resiliently deformable hollow projection, ~~and~~

wherein when said card is retained in said electrical connector apparatus, a volume of said card and said electrical connector apparatus is less than a total of the volumes of said card and said electrical connector apparatus taken separately,

wherein an area between said contact and said rigid substrate is empty to permit said contact to move between a fully collapsed deformed state and a fully extended undeformed state,

wherein an opposing force opposing a force deforming and collapsing said contact is provided by said rigid substrate directly to said contact, and

wherein an inside surface of said contact when in the fully collapsed deformed state is in substantially direct contact with the surface of said rigid substrate.

18. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein an exterior surface of said contact ~~of said substrate~~ is generally convex.

19. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein said contact ~~of said substrate~~ is generally dome-shaped.

20. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein said contact ~~of said substrate~~ comprises a metal.

21. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein said contact ~~of said substrate~~ comprises an insulating material treated so as to be conductive.

22. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein said rigid substrate comprises a Printed Circuit Board (PCB).

23. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 22, wherein said PCB is flexible.

24. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein said rigid substrate supports a conductive track electrically coupled to said contact ~~of said substrate~~.

25. (currently amended) A card reader ~~An electrical connector apparatus~~ as claimed in claim 17, wherein said means for retaining is a sliding catch operable to hold said card in a fixed location.

26. (currently amended)~~A card reader~~ An electrical connector apparatus as claimed in claim 17, wherein said contact ~~of said substrate~~ is secured in position on said rigid substrate using solder.

27. (currently amended)~~A card reader~~ An electrical connector apparatus as claimed in claim 17, wherein said electrical connector comprises a plurality of contacts.

28. (currently amended)~~A card reader~~ An electrical connector apparatus as claimed in claim 17, wherein said rigid substrate supports a contact on each of two opposing surfaces of said rigid substrate.

29. (currently amended)~~A card reader~~ An electrical connector apparatus as claimed in claim 28, wherein said electrical mating connector is arranged to make contact with two mating connectors arranged on the sides of two cards.

30. (currently amended)~~A card reader~~ An electrical connector apparatus as claimed in claim 17, wherein said ~~electrical connector apparatus~~ card reader is a smart card reader for reading a smart card.

31. (currently amended)~~A card reader~~ An electrical connector apparatus as claimed in claim 30, wherein ~~said~~ the smart card is a SIM card for use with a portable telephone.

Claim 32 (cancelled).

33. (currently amended) A portable telephone comprising an electrical
~~connector apparatus~~ a card reader as claimed in claim 17.